

### **AMENDMENTS TO THE CLAIMS**

This Listing of Claims will replace all prior versions and listings of claims in the application.

#### **Listing of Claims:**

1. (Currently Amended) A method for attracting a neural progenitor cell, or a progeny of a neural progenitor cell, to a site of damage or lesion in a central nervous system (CNS) tissue of a subject having CNS damage or lesion, the method comprising delivering to the striatum, pallidum, septum, cortex, external capsule, internal capsule, substantia nigra-ventral tegmentum, or at or adjacent to an ependymal or subependymal zone of an individual having CNS damage or lesion a sufficient amount of a purified TGF- $\alpha$  polypeptide or a functional fragment thereof comprising CysX7CysX4CysX10CysXCysX8Cys (SEQ ID NO: 1), wherein said delivery is outside of the ventricles, and wherein said administration is outside of the ventricles and to a location selected from the group consisting of the striatum, pallidum, septum, cortex, external capsule, internal capsule, substantia nigra-ventral tegmentum, and at or adjacent to an ependymal or subependymal zone, and wherein said delivery~~administration~~ effects migration of the neural progenitor cell or a progeny thereof to the a site of damage or lesion in the CNS tissue, thereby obtaining a therapeutic effect~~said migration of the neural progenitor cell or a progeny thereof to a site of damage or lesion in the CNS tissue being evidenced by an amelioration of behavioral deficits attributable to the damage or lesion.~~
2. (Currently Amended) The method of claim 1, ~~further comprising delivering a sufficient amount of a purified TGF- $\alpha$  polypeptide or a functional fragment thereof comprising CysX<sub>7</sub>CysK<sub>4</sub>CysX<sub>10</sub>CysXCysX<sub>8</sub>Cys (SEQ ID NO: 1), to~~wherein the administration further stimulates differentiation of the neural progenitor cell or a

progeny thereof, said stimulation of differentiation of the neural progenitor cell or a progeny thereof being evidenced by an amelioration of behavioral deficits attributable to the damage or lesion.

3. (Canceled)
4. (Canceled)
5. (Currently Amended) The method of claim 1, wherein the purified composition comprising the TGF- $\alpha$  polypeptide or a functional fragment thereof comprising CysX<sub>2</sub>CysK<sub>4</sub>CysX<sub>14</sub>CysXCysX<sub>3</sub>Cys (SEQ ID NO: 1), is delivered is administered by intrastriatal infusion.
6. (Original) The method of claim 1, wherein the central nervous system (CNS) tissue is brain tissue.
7. (Original) The method of claim 6, wherein the brain tissue is adjacent to a subependymal zone.
8. (Original) The method of claim 1, wherein the central nervous system (CNS) tissue is spinal nerve root origins.
- 9-32. (Canceled)
33. (Currently Amended) A method for attracting a neural progenitor cell, or a progeny thereof, to a site of damage or lesion in a central nervous system (CNS) tissue of a subject having CNS damage or lesion, the method comprising administering to the subject a composition comprising a therapeutically effective amount of purified transforming growth factor alpha (TGF- $\alpha$ ) polypeptide, or functional fragment thereof comprising CysX<sub>2</sub>CysK<sub>4</sub>CysX<sub>14</sub>CysXCysX<sub>3</sub>Cys (SEQ ID NO: 1), wherein said administration is outside of the ventricles and to a location selected from

the group consisting of the striatum, pallidum, septum, cortex, external capsule, internal capsule, substantia nigra-ventral tegmentum, and at or adjacent to an ependymal or subependymal zone, and wherein said administration ~~to~~ attracts the neural progenitor cell or it's a progeny thereof to the a site of damage or lesion in the CNS tissue, wherein said administration is outside of the ventricles in the striatum, pallidum, septum, cortex, external capsule, internal capsule, substantia nigra-ventral tegmentum, or at or adjacent to an ependymal or subependymal zone of at or adjacent to an ependymal or subependymal zone said attraction of the neural progenitor cell or a progeny thereof to a site of damage or lesion in the CNS tissue being evidenced by an amelioration of behavioral deficits attributable to the damage or lesion.

34-62. (Canceled)

63. (Currently Amended) A method for attracting a neural progenitor cell, or a progeny thereof, to a site of damage or lesion in a central nervous system (CNS) tissue of a subject having CNS damage or lesion, the method comprising intrastratially administering to the subject a composition comprising a therapeutically effective a sufficient amount of purified a transforming growth factor alpha (TGF- $\alpha$ ) polypeptide, or functional fragment thereof comprising  
~~CysX<sub>2</sub>CysK<sub>4</sub>CysX<sub>4</sub>CysXCysX<sub>4</sub>Cys (SEQ ID NO: 1), to~~ wherein said administration attracts the neural progenitor cell or it's a progeny thereof to the a site of damage or lesion in the CNS tissue, said attraction of the neural progenitor cell or a progeny thereof to a site of damage or lesion in the CNS tissue being evidenced by an amelioration of behavioral deficits attributable to the damage or lesion.
64. (Previously Presented) The method of claim 1, 33, 63, 65 or 66 wherein said administration is by continuous infusion.

65. (Currently amended) A method for attracting a neural progenitor cell, or a progeny of a neural progenitor cell, to a site of damage or lesion in a central nervous system (CNS) tissue of a subject having CNS damage or lesion, the method comprising delivering to the striatum, pallidum, septum, cortex, external capsule, internal capsule, substantia nigra-ventral tegmentum, or at or adjacent to an ependymal or subependymal zone of an individual having CNS damage or lesion a sufficient amount of a purified TGF- $\alpha$  polypeptide or a functional fragment thereof comprising CysX<sub>2</sub>CysK<sub>4</sub>CysX<sub>10</sub>CysXCysX<sub>6</sub>Cys (SEQ ID NO: 1), wherein said delivery is outside of the ventricles, and wherein said administration is outside of the ventricles and to a location selected from the group consisting of the striatum, pallidum, septum, cortex, external capsule, internal capsule, substantia nigra-ventral tegmentum, and at or adjacent to an ependymal or subependymal zone, wherein said delivery administration effects migration of the neural progenitor cell or a progeny thereof to the a site of damage or lesion in the CNS tissue, and wherein the delivering of TGF- $\alpha$  polypeptide or a functional fragment thereof comprising CysX<sub>2</sub>CysK<sub>4</sub>CysX<sub>10</sub>CysXCysX<sub>6</sub>Cys (SEQ ID NO: 1) administration is for a period of at least about sixteen days, thereby obtaining a therapeutic effect said migration of the neural progenitor cell or a progeny thereof to a site of damage or lesion in the CNS tissue being evidenced by an amelioration of behavioral deficits attributable to the damage or lesion.
66. (Currently Amended) A method for attracting a neural progenitor cell, or a progeny of a neural progenitor cell, to a site of damage or lesion in a central nervous system (CNS) tissue of a subject having CNS damage or lesion, the method comprising delivering to the striatum, pallidum, septum, cortex, external capsule, internal capsule, substantia nigra-ventral tegmentum, or at or adjacent to an ependymal or subependymal zone of an individual having CNS damage or lesion a sufficient

administering to the subject a composition comprising a therapeutically effective amount of a purified TGF- $\alpha$  polypeptide or a functional fragment thereof comprising CysX<sub>2</sub>CysK<sub>4</sub>CysX<sub>10</sub>CysXCysX<sub>8</sub>Cys (SEQ ID NO: 1), wherein said delivery is outside of the ventricles, and wherein said administration is outside of the ventricles and to a location selected from the group consisting of the striatum, pallidum, septum, cortex, external capsule, internal capsule, substantia nigra-ventral tegmentum, and at or adjacent to an ependymal or subependymal zone, wherein said delivery administration effects migration of the neural progenitor cell or a progeny thereof to the a site of damage or lesion in the CNS tissue, and wherein the delivering of TGF- $\alpha$  polypeptide or a functional fragment thereof comprising CysX<sub>2</sub>CysK<sub>4</sub>CysX<sub>10</sub>CysXCysX<sub>8</sub>Cys (SEQ ID NO: 1) administration is initiated weeks after the occurrence of the injury/damage or lesion, thereby obtaining a therapeutic effect said migration of the neural progenitor cell or a progeny thereof to a site of damage or lesion in the CNS tissue being evidenced by an amelioration of behavioral deficits attributable to the damage or lesion.

67-69. (Canceled)

70. (Currently Amended) A method for attracting a neural progenitor cell, or a progeny of a neural progenitor cell, to a site of damage or lesion in a central nervous system (CNS) tissue of a subject having CNS damage or lesion, the method comprising delivering administering to the forebrain or midbrain of the subject a composition comprising a therapeutically effective an individual having CNS damage or lesion a sufficient amount of a purified TGF- $\alpha$  polypeptide or a functional fragment thereof comprising CysX<sub>2</sub>CysK<sub>4</sub>CysX<sub>10</sub>CysXCysX<sub>8</sub>Cys (SEQ ID NO: 1), wherein said delivery administration is outside of the ventricles, and wherein said delivery administration effects migration of the neural progenitor cell or a progeny thereof to the a site of damage or lesion in the CNS tissue, thereby obtaining a therapeutic

~~effects~~said migration of the neural progenitor cell or a progeny thereof to a site of damage or lesion in the CNS tissue being evidenced by an amelioration of behavioral deficits attributable to the damage or lesion. .

71. (Currently Amended) The method of any of claims 1, 33, 63, 65, 66, or 70, wherein the CNS damage or CNS lesion results from ischemia.
72. (Currently Amended) The method of any of claims 1, 33, 63, 65, 66, or 70, wherein the progenitor cell or a progeny thereof is from the ependymal zone.
73. (Canceled)